

Amendments to the Specification:

This version of paragraph 53 will replace all prior versions and listings, and contains no new subject matter therein:

[0053] For both apparatus and all algorithms, however, the operating principle is the same: Firstly, the mass of inner ring 714 is oscillating under springs 712 and springs 752, where spring 752 is coupled to ring 714 by electromagnetic forces due to applied current(s). This oscillation dampens torsional vibrations of shaft 705. Secondly, motion-to-signal transducers (e.g. accelerometers) identify undesired harmonic motion, in inner ring 714 relative to sheath 770. Thirdly, calculations are made on transducer output in order to determine an output that will yield a corresponding dampening spring stiffness improvement i.e. those applied current changes that, as a result of a change of total effective spring constant (for oscillation), improve dampening of the detected undesired harmonic motion. Finally, those current changes are applied (feedback). The electromagnetic feedback solutions described herein amount to controlled passive, semi-active and active rather than passive elements of the overall mechanical system, whereas the spring-mass systems described previously are passive elements. The active element is, of course, the combination of one of electromagnetic apparatus 800 or and 900 with ring 714 and sheath 770.